DOCUMENT RESUME

ED 463 414 CE 082 984

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TITLE Factors Influencing the Turnover and Retention of Minnesota's Secondary Career and Technical Education Teachers.
PUB DATE 2001-12-00
NOTE 15p.; Paper presented at the Annual Meeting of the Association for Career and Technical Education (75th, New Orleans, LA, December 13-16, 2001).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Beginning Teacher Induction; Beginning Teachers; *Labor Turnover; Secondary Education; Success; *Teacher Attitudes; Teacher Burnout; Teacher Morale; *Teacher Motivation; Teacher Persistence; Teaching Conditions; Teaching (Occupation); Vocational Education; *Vocational Education Teachers
IDENTIFIERS *Career and Technical Education; *Minnesota

ABSTRACT

A study was conducted to identify why secondary career and technical education (CTE) teachers, especially in Minnesota, remain in or leave the teaching profession. Research recently reported that nearly 22 percent of all teachers leave the teaching profession within the first three years of teaching. The population for this study was the 258 baccalaureate and post-baccalaureate graduates who obtained a standard or vocational teacher license in one of four vocational service areas between 1995 and 1999 at the University of Minnesota. The graduates were mailed surveys, with responses received from 79 (40 percent of the deliverable surveys). The study found differences between teachers who leave and those who remain in the teaching profession regarding their perception of the teaching commitment level and first-year teaching experience. Those who remained in the teaching profession were extremely committed to teaching, and they rated their first-year teaching experience as more positive than those who left. Teachers who stayed also rated their skills in organization and planning, functioning within a team environment, and practical experience higher than those who left. Those who left most often cited job-related stress as the reason for leaving. Recommendations were made for further research concerning the teaching environment and how it can be modified in order to encourage more CTE teachers to remain in the profession. (Contains 30 references.) (Author/KC)

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CE082954

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Abstract

This study reports results of research conducted to identify why secondary career and technical education (CTE) teachers remain in or leave the teaching profession. The retention of CTE teachers is an issue of concern in our nations public schools. The shortage of CTE teachers and ensuring the quality of education provide reasons for this concern. DePaul (2000) recently reported that nearly 22% of all teachers leave the teaching profession within the first three years of teaching. Findings from this study reported differences between teachers who leave and remain in the teaching profession regarding perception of their teaching commitment level and first-year teaching experience. Job related stress was the reason cited most often for leaving the teaching profession.

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This study reports results of research conducted to identify why secondary career and technical education (CTE) teachers remain in or leave the teaching profession. The retention of CTE teachers is an issue of concern in our nations public schools. The shortage of CTE teachers and ensuring the quality of education provide reasons for this concern. DePaul (2000) recently reported that nearly 22% of all teachers leave the teaching profession within the first three years of teaching. Findings from this study reported differences between teachers who leave and remain in the teaching profession regarding perception of their teaching commitment level and first-year teaching experience. Job related stress was the reason cited most often for leaving the teaching profession.

Literature Review

Few studies have been reported addressing the turnover and retention of secondary career and technical education (CTE) teachers. Lynch (1996) suggested the need for mentoring programs, assistance from colleagues, time to plan and reflect with colleagues, in-service education, and help with teaching materials and student learning as areas of assistance for CTE teacher retention. These ideas suggest ways to retain CTE teachers. What currently is not known in the CTE teaching profession are the factors influencing secondary CTE teachers to remain in or to leave the teaching profession.

Studies have been conducted relating to turnover and retention of CTE agriculture teachers (Cole, 1983; Knight & Bender, 1978; Miller 1974; and Reilly & Welton, 1979). Reasons identified for leaving the secondary agriculture teaching profession included long work hours, lack of teacher respect, student discipline problems, workload, and school facilities (e.g., inadequate resources, outdated equipment). Reasons identified for remaining in the secondary agriculture teaching profession included the acquisition of technical skills (e.g., knowledge of subject matter), investment in professional preparation, enjoyment of working with people, and teaching as a career provided a feeling of accomplishment and success.

In other studies related to CTE teacher turnover and retention, high school CTE teachers have identified job-related stress as a reason for leaving the teaching profession (Farber,

1984; Osborne, 1992: and Terry, 1997). Research conducted by Adams, Heath-Camp and Camp (1999) analyzed a series of school system-related variables associated with secondary CTE teacher stress. Pettegrew and Wolff (1982) define task stress as the stress experienced from specific job-related tasks and role overload as a lack of adequate teaching resources.

Research conducted previously studied why public school teachers (elementary and high school) leave the teaching profession (Chapman & Green, 1986; Chapman & Hutcheson, 1982; Grissmer & Kirby, 1997; Murnane, Singer, Willett, et al., 1991; Schlecty & Vance, 1983; and U.S. Department of Education, 1997). Factors identified from these research studies included career dissatisfaction, financial compensation, job challenges, limited recognition from administration, limited classroom resources, and student discipline problems.

Boesel and McFarland (1994) report a 9% decline since 1987-88 of CTE teachers in the nation's secondary schools. Research reported in Minnesota (Yussen, Browning, & Colby, 1999) indicated there is a shortage of business, family and industrial technology teachers. In 1999, Minnesota secondary teacher vacancies included business (69 vacancies), industrial and vocational education (78 vacancies), and home economics/family studies (65 vacancies). A national study by Guarino, Brewer, and Hove (2000) identified CTE teaching vacancies most difficult to fill for industrial education and trade and industry.

This study is concerned with the turnover and retention of secondary CTE teachers. For the purpose of this study Price's (1997) definition of turnover will be adopted. Price defines turnover as "the degree of individual movement across the membership boundary of a social system" (p. 4). Mobility data related to turnover includes changing: (a) employer, (b) occupation, (c) geographic location, (d) employed to unemployed, and (e) into and out of the labor force. Turnover focuses on the movement of the individual, not the movement within the organization. Retention is defined as remaining in the teaching profession (Grady & Figueira, 1987). Retention variables contributing to a teacher's decision to remain in the teaching profession include personal characteristics, job and career satisfaction, and the opportunity to move within the organization.

Based upon the shortage of CTE teachers, the importance of studying turnover and retention is even more critical. In order to retain teachers in the profession, research is needed to understand the turnover and retention variables.

Theoretical Framework

Various models and theories have been developed to serve as a foundation to studying teacher retention. Holland's (1973) theory of vocational choice posits that vocational satisfaction, stability, and achievement depend on the congruence between one's personality and the environment in which one works. The theory suggests ideas to assist individuals when selecting jobs, changing jobs, and attaining career satisfaction. Teachers who rate themselves higher in skills and abilities, values, and professional accomplishments should exhibit more satisfaction with their career. A work environment

where these factors are supported can greatly influence a teacher's decision to remain in or to leave the teaching profession.

Holland's theory of vocational choice recognizes one's personality and environment as factors to remain in or to leave the teaching profession. Individual's search for a work environment that will let them exercise their skills and abilities, express attitude and values, and take on problems and roles (Holland, 1973). Each of these elements are related to Krumboltz' factors that influence career decision-making. Krumboltz' (1979) social learning theory of career decision-making identifies four key factors influencing the nature of career decision. These factors included genetic endowments, environmental influences, learning experiences, and task approach skills. The basis for this theory is the need to understand one's educational and occupational preference and how that influences selection of an occupation. Genetic endowments include race, gender and physical appearance and physical characteristics. Environmental influences include social, cultural, political or economic influences. Task approach skills affect the outcome of each task. Any direct effect produced by one's action is part of our learning experiences. An understanding of these factors can help answer the question of why individuals change occupations throughout their lives.

Expanding on Holland's theory of vocational choice and Krumboltz' social learning theory, Chapman developed a model associated with teacher retention (Chapman, 1983; Chapman, 1984; and Chapman & Green 1986). The model suggested that teacher retention is a function of: (a) a teachers' personal characteristics, (b) educational preparation, (c) initial commitment to teaching, (d) quality of their first teaching experience, (e) professional and social integration into teaching, and (f) external influences. These six factors influence career satisfaction and relate to a teacher's decision to remain in or leave the teaching profession (Holland, 1973; and Krumboltz', 1979).

Over the years Chapman tested his model of influences associated with teacher attrition on graduates who taught continuously, those who started teaching but left the profession, those who left teaching but returned at a later date, and those who never taught. This research study utilizes Chapman's (1984) model. Baccalaureate and post-baccalaureate graduates who went into teaching and continuously taught, or taught and left the teaching profession were part of this research study. The six functions of teacher retention were referred to in developing the survey questions. Chapman and Lowther's model (1982) illustrates that teachers who rate themselves higher in skills, abilities, values, and professional accomplishments, should exhibit more career satisfaction than teachers who rate themselves low in those areas. Chapman and Hutcheson's research in 1982 reported that those who remain in or left teaching differed significantly in their self-rating of skills and abilities.

Purpose and Research Questions

The purpose of this study was to identify factors that influence the turnover and retention of secondary CTE teachers. In addition, a second purpose was to identify possible skills

teachers possess and other possible factors that may determine a teacher's willingness to continue teaching. The following research questions guided this study:

1. Is there a statistically significant difference between two groups of teachers (those choosing to leave and those remaining in the profession) concerning perception of their own teaching commitment level?
2. Is there a statistically significant difference between two groups of teachers (those choosing to leave and those remaining in the profession) concerning perception of their own first-year teaching experience?
3. What reasons influence a secondary career and technical education teacher's decision to leave the teaching profession?
4. Is there a statistically significant difference between two groups of teachers (those choosing to leave and those remaining in the profession) concerning perception of their own skill level?
5. Is there a statistically significant difference between two groups of teachers (those choosing to leave and those remaining in the profession) concerning perception of their own willingness to continue teaching?

Methodology

The survey developed for this study employed items used in earlier studies (Chapman & Hutchenson, 1982; and Miller, 1974). Additional questions were developed to obtain responses related to the quality of teacher preparation. The survey consisted of five sections: (a) educational preparation (research question one), (b) teaching experience (research questions two and three), (c) skills and abilities (research question four), (d) institutional factors (research question five), and (e) demographics. Survey questions included: (a) open-ended, (b) close-ended with ordered choices, (c) close-ended with unordered response choices, and (d) partially close-ended (Dillman, 1978). Each of the questions asked in the survey fit into one of the four categories.

Teacher educators from institutions offering degrees or licensures in CTE teacher education (i.e. bachelor's, fifth-year program, master's, or doctoral degrees.) reviewed and validated the survey. These teachers were familiar with the educational preparation of teachers and the skills and abilities taught in the teacher preparation program. These experts were asked to make recommendations for improving, adding, or deleting any survey items.

The population for this study was baccalaureate and post-baccalaureate graduates who obtained a standard and/or vocational teacher license in one of four vocational service areas between 1995 and 1999 at the University of Minnesota. The 258 graduates represented the following four vocational service areas: (a) agricultural (31), (b) business and marketing (71), (c) family and consumer science (67), and (d) trade and industrial education (89). The list of graduates was obtained from the Director of Student and Professional Services in the College of Education and Human Development.

The initial mailing was sent to the 258 graduates in February 2000, with follow-up mailings in March and April 2000. Sixty surveys were returned non-deliverable or with incomplete information. For surveys returned non-deliverable, a more current address

was located and sent a second time. Phone numbers were not available for the participants, so telephone follow-ups were not feasible. Of the 198 surveys deliverable, a total of 79 (40%) surveys were received by June 2000, representing self-reporting data for 11 (14% of total respondents) participants from agriculture, 17 (22%) participants from business and marketing, 20 (25%) participants from family and consumer sciences, and 31 (39%) participants from trade and industrial education. Data is self-reported and is based upon participant's feelings and perceptions of themselves. Twenty-six (33% of those responding) had taught for at least one year, but indicated they were no longer teaching (leavers). For the purpose of the research reported in this study, stayers are defined as teachers who entered the teaching profession and are still teaching. Leavers are defined as teachers who taught at least one year, and then choose to leave the teaching profession.

Data analysis determined whether the two groups (those choosing to leave and those remaining in the profession) differ in their reasons to remain in teaching. Median and modes are reported here merely as descriptions of data centers, which are most appropriate for ordinal data. Significant difference was tested using Mann-Whitney (U-test) for those choosing to leave and those remaining in the profession. (Median and modes are not used in the computations of the Mann-Whitney (U-test), nor is the U-test a test of difference between group medians and group modes.) The p-value for statistical significance was set at the .05 level for all statistical comparisons. Participants who did not respond to a specific question were not included in the statistical comparisons for that specific question.

Findings

Sixty-seven percent of the participants were female and 31% were male. Two (2%) participants did not indicate their gender. More than half of the population was between 31 and 50 years of age, and white, non-hispanic. Twenty-four percent had completed a bachelor's degree, 74% completed a master's degree, and 2% identified "other" degrees. Of the participants responding, 40% had five years or less of work experience outside the teaching profession.

Research question 1 asked, "Is there a statistically significant difference between two groups of teachers (those choosing to leave and those remaining in the profession) concerning perception of their own teaching commitment level?" The following ratings were used to rate teaching commitment level: 1 = extremely committed, 2 = above average commitment, 3 = some commitment, and 4 = no commitment. The median score (with mode in parentheses) for those choosing to leave was 3 (3), and for those remaining in the teaching profession was 1 (1). The U-test revealed a statistically significant difference ($p \leq .0001$) between those choosing to leave and those remaining in the profession.

Research question 2 asked, "Is there a statistically significant difference between two groups of teachers (those choosing to leave and those remaining in the profession) concerning perception of their own first-year teaching experience?" The following ratings were used to rate their first-year teaching experience: 1 = extremely positive, 2 =

very positive, 3 = positive, 4 = somewhat positive, and 5 = poor experience. The median score (with mode in parentheses) for those choosing to leave was 4 (5), and for those remaining in the profession was 3 (3). The U-test revealed a statistically significant difference ($p \leq .0275$) between those choosing to leave and those remaining in the profession. It is important to note that of the 26 leavers, 10 leavers did not respond to this question. Possible reasons for the 10 leavers not responding to this question may have been due to the fact that they were no longer teaching or their first-year teaching experience was a very poor experience and were unable to adequately respond to this question.

Thirty-three percent of those responding indicated they were no longer teaching (leavers). Of those leavers responding, sixty-five percent had taught less than three years. Research question 3 asked, "What reasons influence a secondary career and technical education teacher's decision to leave the teaching profession?" In addition to the 12 reasons provided on the survey, participants provided five "other" reasons. The reason cited most often for leaving the teaching profession was job related stress with 31% of the participants selecting this reason. The frequency and number of participants selecting any one reason is provided in Table 1.

Table 1
Reasons Left Teaching Profession (N=26).

Reasons	N	%
Job related stress	8	31
Classroom management issues	7	27
Perceived limit on salaries	7	27
Program/teaching position ended	6	23
Decided teaching wasn't for me	5	19
Institutional climate	4	14
Licensure requirements	3	12
Lack of job advancement	3	12
Additional time commitments outside of teaching	3	12
Lack of administrative support	2	7
Obtain a job in business/industry	2	7
Acquire additional job-related experience	2	7
Moved	2	7
Lack of job security	1	4
Pursued graduate degree	1	4
Retired	1	4

Note. Number (n) is based on 26 participants who indicated they were no longer teaching (leavers). Reasons are listed in order of frequency reported.

Research question 4 asked, "Is there a statistically significant difference between two groups of teachers (those choosing to leave and those remaining in the profession) concerning perception of their own skill level?" Participants were asked to self-report their current skill level using a Likert type scale. The following descriptors were used for the Likert type scale: 1 = very poor/nonexistent, 2 = poor, 3 = fair, 4 = good, 5 = excellent. The U-test revealed statistically significant differences for supervision and leadership ($p \leq .040$) and practical experience in teaching area ($p \leq .002$). Table 2 illustrates the differences between two groups of teachers (those choosing to leave and those remaining in the profession) with regard to their perception of skill level.

Concerning the areas where the U-test returned significant results, "practical experience in teaching area" and "supervision and leadership", when getting significant results using the U-test, a distribution free test, it is unclear what exactly we are testing (Howell, 1997). The results tell us that the two groups differ on the measure of the dependent variable. On these two items the medians and modes don't reveal much, but the group response means (Stayers, 4.26; Leavers, 3.42; and Stayers, 4.28; Leavers, 3.96, respectively) imply that the difference may be in the group means.

Table 2
Differences Between Two Groups of Teachers with Regard to Their Perception of Skill Level

Skills	Median		Mode		U-Test
	Leavers	Stayers	Leavers	Stayers	p-values
Written communication skills	4	4	4	4	.908
Oral communication skills	5	4	5	5	.955
Organization and planning	4	4	4	5	.702
Function within a team environment	4	5	4	5	.202
Supervision and leadership	4	4	4	4	.040
Evaluation of ideas and presentations	4	4	4	4	.061
Development of new approaches to problems	4	4	4	4	.661
Persuasion of others to accept your ideas	4	4	4	4	.708
Involvement with long-term projects	4	4	4	4	.897
Conflict resolution	4	4	4	4	.647
Integrate technology into the curriculum	4	4	3	4	.207
Knowledge of curriculum development	4	4	4	4	.119
Knowledge of teaching methodologies	4	4	3	4	.696
Practical experience in teaching area	4	4	4	5	.002

Note. The values are considered significant at the $p \leq .05$. Leavers N = 26, Stayers N = 53.

Research question 5 asked, "Is there a statistically significant difference between two groups of teachers (those choosing to leave and those remaining in the profession) concerning perception of their own willingness to continue teaching?" Participants were asked to self-rate each item as to its importance in determining their willingness to

continue teaching. The following descriptors were used for the Likert type scale: 1 = not important, 2 = somewhat important, 3 = very important, and 4 = extremely important. Findings indicate no statistically significant difference between the two groups and their perception of the 18 items concerning their willingness to continue teaching. Table 3 illustrates the differences between two groups of teachers (those choosing to leave and those remaining in the profession) with regard to their perception of willingness to continue teaching.

Table 3
Differences Between Two Groups of Teachers with Regard to Their Perceptions of Willingness to Continue Teaching

Continue Teaching	Median		Mode		U-Test
	Leavers	Stayers	Leavers	Stayers	p-values
Positive teaching experience	4	4	4	4	.657
Currency of cooperative learning techniques	3	3	2	3	.961
Professional development opportunities	3	3	3	4	.385
Participation in professional associations	2	3	3	3	.189
Inner senses of knowing I'm doing a good job	4	4	4	4	.173
Availability of induction/mentoring program	3	2	3	2	.096
Administrative support for program development	4	4	4	4	.312
Recognition by supervisors/administrators	3	3	3	3	.305
Recognition by peers	3	3	3	3	.966
Recognition by student	3	3	3	3	.419
Approval of family and/or close friends	3	3	3	3	.356
Adequate time to complete job responsibilities	4	4	4	4	.913
Pleasant working conditions	3	4	3	4	.568
Quality and quantity of resources available	3	3	3	3	.953
Chance to contribute to important decisions	3	3	4	3	.210
Leadership opportunities	3	3	2	3	.469
Perception of job security	3	3	4	4	.608
Potential for salary advances	3	3	3	4	.837

Note. The values are considered significant at the $p \leq .05$. Leavers N = 26, Stayers N = 53

Conclusions

1. There is a statistically significant difference between the two groups of teachers (those choosing to leave and those remaining in the profession) concerning perception of their own teaching commitment level. Those remaining in the profession were extremely committed to teaching. Various reasons influence a teacher's decision to leave the teaching profession. Job related stress was cited most often.

2. There is a statistically significant difference between the two groups of teachers (those choosing to leave and those remaining in the profession) concerning their own

perception of first-year teaching experience. Those choosing to leave did not rate their first-year teaching experience as positive as those remaining in the profession.

3. Findings from this study are consistent with previous research studies conducted on teacher turnover and retention (Farber, 1984; Osborne, 1992; and Terry, 1997). Job related stress was the most common reason cited for leaving the teaching profession.

4. Teacher's choosing to leave or to remain in the teaching profession rated most frequently (mode=5) perception of their own skill level for oral communications as excellent. This skill was the only skill rated most frequently by those choosing to leave the profession as excellent. Those remaining in the teaching profession also rated most frequently organization and planning, function within a team environment, and practical experience in teaching area as excellent. These findings support Holland's (1973) theory of vocational choice and Chapman and Lowther's (1982) model of teacher retention that teachers who rate themselves higher in skills and abilities, values, and professional accomplishments exhibit more career satisfaction than teachers who rate themselves lower in these areas.

5. Teacher's choosing to leave or to remain in the teaching profession rated most frequently (mode=4) five factors that contribute to their own willingness to continue teaching. The five factors rated extremely important include positive teaching experience, inner sense of knowing I'm doing a good job, administrative support for program development, adequate time to complete job responsibilities, and perception of job security. These findings support Holland's (1973) theory and Krumboltz' (1979) theory that a teacher's work environment can impact their decision to remain in or to leave the teaching profession. Three of the five factors rated extremely important to continue teaching are related to a teacher's work environment.

Recommendations

1. Job related stress was the main reason influencing 31% of the participants to leave the teaching profession. Further research should be conducted to determine what the specific job related stress issues are and identify ways to assist teachers. Based upon Holland's (1973) theory and Krumboltz' (1979) theory, environmental influences are one factor that influence one's career decision.

2. Recent literature has indicated the importance of mentoring programs, assistance from colleagues, time to plan, in-service education, and resources for new faculty (Lynch, 1996) as factors to retain CTE teachers. Research needs to be conducted to include these factors in determining the significance of retaining CTE teachers in the profession.

3. Further research should be conducted over the long-range impact of turnover and retention of teachers. As teachers progress in the number of years teaching, do reasons that influence a teacher's decision to leave the teaching profession change or remain the same?

4. Further research should be conducted to compare the perception of skill level important to continue teaching between the two groups of teachers (those choosing to leave and those remaining in the profession) for each of the CTE teaching areas (agriculture, business and marketing, family and consumer sciences, and trade and industrial education).

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